

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) A plasma CVD apparatus comprising:
a vacuum chamber;
a first electrode for supplying an electric energy inside the vacuum chamber, the first electrode including a surface in which apertures are formed;
a substrate support configured to support a substrate ~~and positioned opposing which opposes~~ the surface of the first electrode, wherein the substrate support is configured to enable movement of the substrate in a first direction through the chamber; and
[[an]] ~~first and second~~ introducing [[port]] ~~ports~~ for gas, located between the first electrode and the substrate, wherein the introducing port, the substrate support, and the first electrode are arranged relative to one another so that a ~~first~~ flow of gas is introduced by the ~~first~~ introducing port into the chamber in a direction parallel [[with]] ~~to and along~~ the first direction, ~~a second flow of gas is introduced by the second introducing port into the chamber in a direction parallel to and opposite to the first direction, and the first and second flows of gas are [is]~~ rectified in a direction away from a film formation surface of the substrate and toward the apertures so ~~as to prevent that the flow of gas does not gradually contain a portion that: (1) flows toward the substrate and (2) includes~~ particles with diameters greater than a thickness of a film to be formed on the substrate ~~from being deposited on the film formation surface of the substrate;~~
wherein the gas is exhausted through the apertures to outside of the vacuum chamber.

2. (Previously Presented) The apparatus according to claim 1, further comprising:
a transporting means for transporting continuously the substrate in the first direction.

3. (Previously Presented) The apparatus according to claim 1, wherein each of the apertures is circular,

wherein the apertures are located on the surface of the first electrode at constant intervals.

4. (Previously Presented) The apparatus according to claim 1, wherein the first electrode is a mesh-like plate.

5. (Cancelled)

6. (Previously Presented) The apparatus according to claim 1 further comprising a second electrode opposing the first electrode for supplying the electric energy inside the vacuum chamber.

7. (Previously Presented) The apparatus according to claim 6, wherein the substrate is supported between the first and second electrodes by the substrate support.

8. (Previously Presented) The apparatus according to claim 2, wherein the transporting means includes at least one selected from the group consisting of an unwinding roll and a winding roll.

9. (Previously Presented) The apparatus according to claim 1 wherein the substrate is located horizontally and has a substrate surface that is downwardly opposed to the first electrode.

10. (Currently Amended) An apparatus comprising:
a chamber;
a first electrode in the chamber;
a second electrode in the chamber, the second electrode including a surface in which apertures are formed;
a substrate holder to hold support configured to support a substrate between the first and second electrodes wherein the substrate is moved in a first direction through the chamber;
at least [[one]] first and second gas inlet [[port]] ports to introduce a gas to a space between the substrate and the second electrode wherein the first and second gas inlet [[port]]

ports, the substrate holder, support, and the second electrode are arranged relative to one another so that a first flow of gas is introduced by the first gas inlet port in a direction parallel to and along the first direction, a second flow of gas is introduced by the second gas inlet port in a direction parallel to and opposite to the first direction, and the first and second flows of gas are ([is]) rectified in a direction away from a film formation surface of the substrate and toward the apertures so as to prevent that the flow of gas does not gradually contain a portion that: (1) flows toward the substrate and (2) includes particles with diameters greater than a thickness of a film to be formed on the substrate from being deposited on the film formation surface of the substrate.

11. (Previously Presented) The apparatus according to claim 10 wherein the first electrode is grounded.

12. (Previously Presented) The apparatus according to claim 10 wherein the second electrode is located below the first electrode.

13. (Previously Presented) The apparatus according to claim 10 wherein the apparatus is a film formation apparatus.

14. (Previously Presented) The apparatus according to claim 10 wherein the gas inlet port is located in a position between the substrate and the second electrode.

15-19. (Cancelled)

20. (Previously Presented) The plasma CVD apparatus according to claim 1 further comprising an exhaust port and an abnormal discharge preventing plate between the exhaust port and the first electrode wherein the abnormal discharge preventing plate has a plurality of apertures.

21. (Previously Presented) The apparatus according to claim 10 further comprising an exhaust port and an abnormal discharge preventing plate between the second electrode and the exhaust port wherein the abnormal discharge preventing plate has a plurality of apertures.

22. (Currently Amended) A plasma CVD apparatus comprising:
a vacuum chamber;
an exhaust port;
a first electrode for supplying an electric energy inside the vacuum chamber, the first electrode including a surface in which apertures are formed;
a supporting means for supporting a substrate support configured to support a substrate which opposes opposing the first electrode wherein the substrate is moved in a first direction through the chamber;
[[an]] first and second introducing [[port]] ports for gas, located between the first electrode and the substrate, wherein the introducing port, the supporting means, substrate support, and the first electrode are arranged relative to one another so that a first flow of gas is introduced by the first introducing port into the chamber in a direction parallel [[with]] to and along the first direction, a second flow of gas is introduced by the second introducing port into the chamber in a direction parallel to and opposite to the first direction, and the first and second flows of gas are [[is]] rectified in a direction away from a film formation surface of the substrate and toward the apertures so as to prevent that the flow of gas does not gradually contain a portion that: (1) flows toward the substrate and (2) includes particles with diameters greater than a thickness of a film to be formed on the substrate from being deposited on the film formation surface of the substrate; and
an abnormal discharge preventing plate between the exhaust port and the first electrode wherein the abnormal discharge preventing plate has a plurality of apertures,
wherein the gas is exhausted through the apertures of the first electrode and the plurality of apertures of the abnormal discharge preventing plate to outside of the vacuum chamber.

23. (Previously Presented) The apparatus according to claim 22, further comprising a transporting means for transporting continuously the substrate in the first direction.

24. (Previously Presented) The apparatus according to claim 22, wherein each of the apertures of the first electrode is circular, and

wherein the apertures are located on the surface of the first electrode at constant intervals.

25. (Previously Presented) The apparatus according to claim 22, wherein the first electrode is a mesh-like plate.

26. (Previously Presented) The apparatus according to claim 22 further comprising a second electrode opposing the first electrode for supplying the electric energy inside the vacuum chamber.

27. (Currently Amended) The apparatus according to claim 26, wherein the substrate is supported between the first and second electrodes by the ~~supporting means~~ substrate support.

28. (Previously Presented) The apparatus according to claim 23, wherein the ~~transporting~~ means includes at least one selected from the group consisting of an unwinding roll and a winding roll.

29. (Previously Presented) The apparatus according to claim 22 wherein the substrate is located horizontally and has a substrate surface that is downwardly opposed to the first ~~electrode~~.

30. (Currently Amended) An apparatus comprising:

a chamber;

a first electrode in the chamber;

a second electrode in the chamber, the second electrode including a surface in which apertures are formed;

at least [[one]] ~~first and second~~ gas inlet [[port]] ports to introduce a gas to a space between the substrate and the second electrode wherein the ~~first and second~~ gas inlet [[port]] ports, the substrate ~~holder~~, support, and the second electrode are arranged relative to one another

so that a first flow of gas is introduced by the first gas inlet port in a direction parallel to and along the first direction, a second flow of gas is introduced by the second gas inlet port in a direction parallel to and opposite to the first direction, and the first and second flows of gas are [is] rectified in a direction away from a film formation surface of the substrate and toward the apertures so as to prevent that the flow of gas does not gradually contain a portion that: (1) flows toward the substrate and (2) includes particles with diameters greater than a thickness of a film to be formed on the substrate from being deposited on the film formation surface of the substrate; and

an abnormal discharge preventing plate between the second electrode and an exhaust port of the chamber wherein the abnormal discharge preventing plate has a plurality of apertures,

wherein the gas is exhausted through the plurality of apertures of the abnormal discharge preventing plate.

31. (Previously Presented) The apparatus according to claim 30 wherein the first electrode is grounded.

32. (Previously Presented) The apparatus according to claim 30 wherein the second electrode is located below the first electrode.

33. (Previously Presented) The apparatus according to claim 30 wherein the apparatus is a film formation apparatus.

34. (Previously Presented) The apparatus according to claim 30 wherein the gas inlet port is located in a position between the substrate and the second electrode.

35. (Previously Presented) The apparatus according to claim 10, further comprising a third electrode surrounding the space and the second electrode,

wherein the third electrode has an opening,

wherein the gas is exhausted from the space through the apertures and the opening of the third electrode.

36. (Previously Presented) The apparatus according to claim 30, further comprising a third electrode surrounding the space and the second electrode,

wherein the third electrode has an opening,

wherein the gas is exhausted from the space through the apertures of the second electrode, the plurality of apertures of the abnormal discharge preventing plate, and the opening of the third electrode.